Loiseleuria procumbens

Alpine azalea

Status

Federal status: G5 N?, Not listed
NH state status: S2, Threatened
ME state status: S1, Threatened

Flora Conservanda Division 2, regionally rare taxa with fewer than 20 occurrences in New England. Population trends are not documented. Some New Hampshire occurrences have been known for more than 100 years, while most were found more recently and have little information in their occurrence record.

The current outcome of *Loiseleuria procumbens* on the WMNF is C-/D+ because one population on adjacent state land is on the brink of extirpation due to recreation impacts that might also affect some WMNF populations. It is expected that recreation impacts will increase in the next 20 years, but so will public awareness, which may mitigate some impacts. The outcome in 20 years should be C, because even though we will lose some populations, the remainder should probably be stable.

Distribution

An arctic circumpolar distribution, with southern extensions of range in suitable, usually alpine habitats. The main areas in which *Loiseleuria procumbens* occurs are North America and Greenland, with a more limited distribution throughout Europe and Eurasia, including northwestern Russia, Siberia, and Japan. In North America, it is circumboreal, extending south to the higher mountains of Maine, New Hampshire, and New York. Some feel these occurrences are disjunct from the species' primary range.

In New Hampshire, all occurrences are in the White Mountains, and all but one are in the WMNF. Occurrences are documented in Sargents Purchase, Thompson and Meserve, Beans Grant, Chandlers Purchase, and Franconia. In Maine, the only known occurrence is on Mt. Katahdin.

Habitat

Preferred habitat is exposed dry-mesic heath alpine areas. *Loiseleuria procumbens* is listed as a component of the alpine heath snowbank and the Diapensia-azalea-rosebay dwarf shrubland communities in NH. The expert panel placed it in the dry/mesic heath meadow system of alpine communities.

Habitat features that are important in providing viability of the dry/mesic heath meadow system include those factors associated with exposure to the elements, especially in winter. The key factors are cold, wind, and snow and ice blast. Other factors include dry to mesic moisture conditions, well-drained sites, thin acidic soils, dessication, and low nutrient tolerant plants. Wind is likely to reduce competition from other species that are not adapted to survive in a harsh environment.

Loiseleuria procumbens, *Diapensia lapponica*, and *Arctostaphylos alpina* reflect the more exposed end of the dry/mesic heath meadow system of alpine communities. *Loiseleuria procumbens* is not as abundant as *Diapensia lapponica* and is not a

community dominant species. The dry/mesic heath meadow system is located on unconsolidated gravel-stony soils.

Limiting Factors

Local experts believe that the threats to this species are the same as the threats to the dry/mesic heath meadow system. Human disturbance is the primary threat to the dry/mesic heath meadow system. Hiker pressures to the system include direct trampling along trails and in areas without trails, typically ridges and peaks, where hikers go "view seeking." As a result, this system is at greater risk on "lesser summits," where use and plants are concentrated in a small area, than in the Presidential Range.

Global warming and acid deposition may be a threat to the dry/mesic heath meadow system, but the threat is uncertain at this time and is likely minor compared to other factors, such as hiker pressures.

Viability concern

WMNF contains 91% of NH population. Only off-Forest occurrence may soon be extirpated, making WMNF populations more important. There is potential for loss of WMNF populations due to recreation impacts. Outcome is near or below identified threshold, so surrogate not used.

Management activities that might affect viability

The activity with potential to impact this species that the WMNF has some control over is trampling by hikers. Management that would reduce the density of trails in the alpine zone and help keep hikers on designated trails, especially near "lesser summits," would reduce the potential for trampling.

Trail construction or other development in the alpine zone could affect this species if it would directly impact dry-mesic heath habitat or increase human traffic near suitable habitat. Trail maintenance activities could alter habitat suitability or directly impact individuals.

References

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